

## **REMARKS/ARGUMENTS**

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the following remarks.

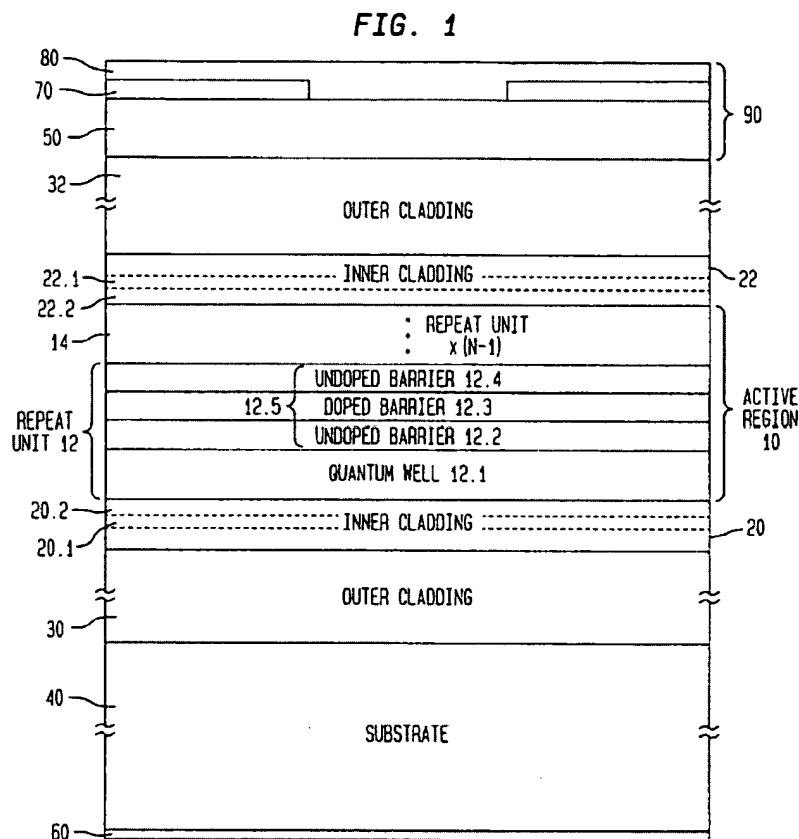
The Applicants originally submitted Claims 1-20 in the application. Presently, the Applicants have neither amended, canceled nor added any claims. Accordingly, Claims 1-20 are currently pending in the application.

### **I. Rejection of Claims 1 and 11 under 35 U.S.C. §102**

The Examiner has rejected Claims 1-20 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,240,114 to Anselm, *et al.* ("Anselm"). Presently, independent Claims 1 and 11 include the element that a dopant barrier is located between a doped layer and a different layer, wherein the dopant barrier includes at least two layers and does not form a pn junction with the doped layer. Anselm, among other elements, fails to teach the element that the dopant barrier is located between the doped layer and the different layer and includes at least two layers.

Anselm is directed to multi-quantum well lasers with selectively doped barriers. (Title) With reference to FIG. 1 of Anselm, reproduced as Illustration 1 below, Anselm teaches that a quantum well 12.1 having barrier layers 12.5 located thereon is surrounded by inner cladding layers 20, 22 and outer cladding layers 30, 32. The barrier layers 12.5 of Anselm comprise a first undoped barrier layer 12.2 located directly on the quantum well 12.1, a second doped barrier layer 12.3 located directly on the first undoped barrier layer 12.2, and a third undoped barrier layer 12.4 located directly on the second doped barrier layer 12.3. Anselm further teaches that the active region 10 may

include a multiplicity of N repeat units 12 stacked between the inner cladding regions 20, 22. Each repeat unit comprises a quantum well (QW) region 12.1 under a barrier region 12.5. Anselm denotes this repeat unit as layer 14. (Column 3, lines 1-15 of the Anselm reference)



### ILLUSTRATION 1

In contrast to what is actually taught by Anselm, the Examiner asserts that the doped layer 12.3 of Anselm is similar to the claimed doped layer and the undoped barrier 12.4 and repeat unit layer 14 of Anselm, collectively, form the claimed dopant barrier that includes at least two layers. Specifically, the Examiner asserts that the undoped barrier 12.4 of Anselm is similar to the first layer of the claimed dopant barrier and the repeat unit layer 14 of Anselm is similar to the second layer of the claimed dopant barrier. The Examiner, however, fails to understand the specific teachings

regarding the repeat unit layer 14 of Anselm. If read more carefully, Anselm teaches that the repeat unit layer 14, if used, would be replaced with the repeat unit 12 shown in FIG. 1, which includes the quantum well 12.1 and the entire barrier layer 12.5. Thus, as shown in the altered drawing below (Illustration 2), another quantum well 12.1 would be located directly on top of the first (or lower) undoped barrier 12.4. Therefore, even if the first (or lower) undoped barrier 12.4 were similar to the first layer of the dopant barrier claimed, the second (or upper) quantum well 12.1 would have to act as the second layer of the dopant barrier claimed, which is impossible.

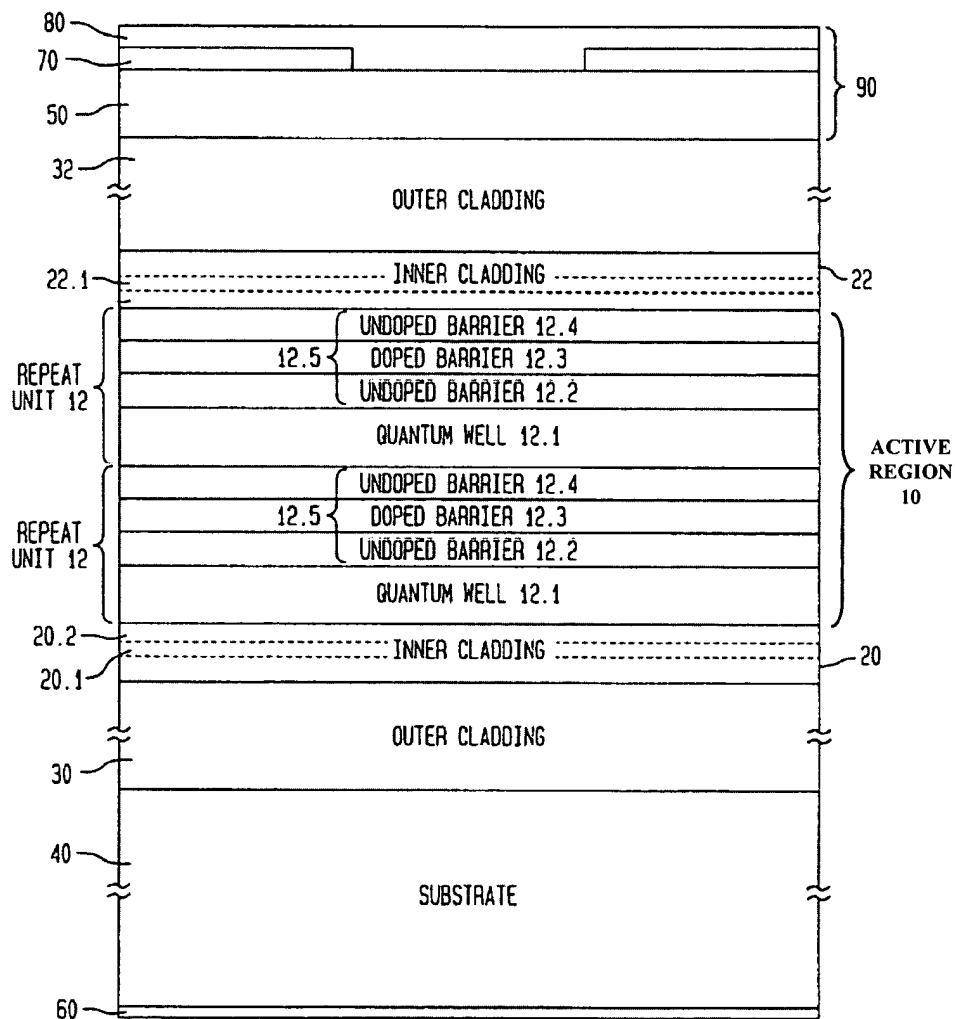


ILLUSTRATION 2

Therefore, Anselm fails to teach the element that the dopant barrier comprises at least two layers. Thus, Anselm does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to Claims 1-20.

## **II. Conclusion**

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1-20.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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Dated: 2-17-04

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